

Application No. 09/438,266
Response to Office Action

Customer No. 01933

REMARKS

Reconsideration of this application, as amended, is respectfully requested.

RE: THE ALLOWABLE SUBJECT MATTER

The Examiner's indication of the allowability of the subject matter of claims 2, 7 and 9 is respectfully acknowledged.

Claims 7 and 9 have been amended so as to be rewritten in independent form to include all of the limitations of their parent claim 6, and to make some minor grammatical improvements so as to place the claims in better form for issuance in a U.S. patent. No new matter has been added, and no new issues with respect to patentability have been raised. Accordingly, it is respectfully submitted that amended independent claims 7 and 9 are now in condition for immediate allowance.

Claim 2, however, has not been rewritten in independent form at this time, since, as is set forth in detail hereinbelow, it is respectfully submitted that its parent claim 1 also recites allowable subject matter.

RE: THE TITLE

The title has been amended to more clearly indicate the nature of the invention to which the claims are directed, as required by the Examiner.

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RE: THE AMENDMENTS TO CLAIMS 1-4, 6, 8 and 12

Claim 8 has been amended so as to be rewritten in independent form to include all of the limitations of its parent claim 6. In addition, claims 8 and 12 have been amended to better comply with the requirements of 35 USC 112, second paragraph, and claims 1-4, 6, 8 and 12 have been amended to make some minor grammatical improvements so as to place the claims in better form for issuance in a U.S. patent.

No new matter has been added, and it is respectfully requested that the amendments to claims 1-4, 6, 8 and 12 be approved and entered and that the rejection under 35 USC 112 be withdrawn.

RE: CLAIM FEE

The application previously contained 12 claims of which 3 were independent. The application now contains 9 claims, of which 5 are independent. Accordingly, payment of a claim fee in the amount of \$172.00 for the addition of 2 extra independent claims is attached hereto. In addition, authorization is hereby given to charge any additional fees which may be determined to be required to Account No. 06-1378.

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RE: THE PRIOR ART REJECTION

Claims 1 and 3-5 were rejected under 35 USC 102 as being anticipated by USP 6,549,653 ("Osawa et al"); and claims 6, 10 and 11 were rejected under 35 USC 102 as being anticipated by USP 6,466,334 ("Komiya et al"). These rejections, however, are respectfully traversed.

As recognized by the Examiner, Osawa et al discloses color estimation means 5, color image means 6 and tristimulus value calculation means (RGB value calculating unit 9).

However, it is respectfully submitted that Osawa et al does not disclose, teach or suggest the feature of the present invention as recited in claim 1 whereby the color reproduction system comprises, in particular, illumination light measuring means for measuring tristimulus values of observation illumination light, and virtual illumination light spectrum calculation means for calculating a virtual illumination light spectrum that provides tristimulus values equal to the tristimulus values of the observation illumination light which are obtained by the illumination light measuring means.

According to Osawa et al, the observation site illumination spectrum data storage unit 4 obtains and stores observation site illumination spectrum data. As disclosed at column 10, lines 33-36 of Osawa et al, the observation site illumination spectrum data "consists of light intensity values ob observation-

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site illumination taken at an interval of 1 nm in a wavelength range from 380 nm to 780 nm" (column 10, lines 33-36). And the tristimulus value calculation means of Osawa et al determines the tristimulus value of an object by multiplying the observation illumination spectrum and the color matching function with the spectral reflectance of an object and carrying out wavelength integration.

By contrast, the illumination light measuring means according to the present invention as recited in claim 1 measures tristimulus values of observation illumination light. And the virtual illumination light spectrum calculation means then calculate a virtual illumination light spectrum that provides tristimulus values equal to the tristimulus values of the observation illumination light which are obtained by the illumination light measuring means.

Thus, it is respectfully submitted that the observation site illumination spectrum data storage unit of Osawa et al does not correspond to the illumination light measuring means of the present invention as recited in claim 1, which measures tristimulus values of observation illumination light, instead of observation illumination spectrum data in the manner described by Osawa et al. In addition, it is respectfully submitted that Osawa et al does not at all disclose, teach or suggest virtual illumination light spectrum calculation means for calculating a

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virtual illumination light spectrum that provides tristimulus values equal to the tristimulus values of the observation illumination light which are obtained by the illumination light measuring means, in the manner of the present invention as recited in claim 1. Indeed, it is respectfully submitted that Osawa et al does not even disclose that tristimulus values of the observation illumination light are used during the process of color reproduction.

Accordingly, it is respectfully submitted that independent claim 1, and claims 2-4 depending therefrom, clearly patentably distinguish over Osawa et al, under 35 USC 102 as well as under 35 USC 103.

According to the present invention as recited in independent claim 6, moreover, the color reproduction system comprises, in particular, an illumination light colorimeter for measuring tristimulus values of observation illumination light on an object observation side, and transferring the tristimulus value data of the observation illumination light to a color correction device through a line; and a color correction device for calculating tristimulus values of the object under the virtual illumination light spectrum generated on the basis of the transferred tristimulus values of the observation illumination light, and converting the tristimulus values into a monitor signal by using monitor profile data.

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By contrast, chromaticity meter 45 of Komiya et al, which the Examiner contends corresponds to the illumination light colorimeter of the present invention as recited in claim 6, measures characteristics of the monitor, and not observation illumination light (see column 8, lines 34-54 of Komiya et al).

In addition, it is respectfully submitted that Komiya et al does not disclose, teach or suggest measuring tristimulus values of an observation illumination light. In this connection, it is noted that spectrometers 42 and 43 of Komiya et al measure observation-time lighting spectral data (see column 8, line 60 of Komiya et al). That is, Komiya et al discloses measuring the observation illumination light spectrum instead of the observation illumination light tristimulus values, in the manner of the present invention as recited in claim 6.

Still further, it is respectfully submitted that Komiya et al does not disclose, teach or suggest a color correction device for calculating tristimulus values of an object under a virtual illumination light spectrum generated on the basis of transferred tristimulus values of the observation illumination light, and whereby the tristimulus values of the object are then converted into a monitor signal. By contrast, it is respectfully submitted that computer 46 of Komiya et al, which the Examiner contends corresponds to the color correction device of the present invention as recited in claim 6, calculates object tristimulus

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values under the observation illumination light spectrum (see Fig. 9 of Komiya et al).

Therefore, it is respectfully submitted that Komiya et al does not disclose, teach or suggest the features of the present invention as recited in claim 6 whereby an illumination light colorimeter measures tristimulus values of observation illumination light on an object observation side, and transfers the tristimulus value data of the observation illumination light to a color correction device through a line; and whereby a color correction device calculates tristimulus values of the object under the virtual illumination light spectrum generated on the basis of the transferred tristimulus values of the observation illumination light, and converts the tristimulus values into a monitor signal by using monitor profile data.

Accordingly, it is respectfully submitted that independent claim 6, and claim 12 depending therefrom, clearly patentably distinguish over Komiya et al under 35 USC 103.

RE: CLAIM 8

The Examiner has not acted on claim 8 on the merits. Nonetheless, it is respectfully pointed out that amended independent claim 8 recites the same above described patentably distinguishing features as claim 6.


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Entry of this Amendment, allowance of all of the claims and the passing of this application to issue are respectfully solicited.

If the Examiner has any comments, questions, objections or recommendations, the Examiner is invited to telephone the undersigned at the telephone number given below for prompt action.

Respectfully submitted,


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